## APPENDIX A

## Engineering Field Trip Report

# Fine Gold Reservoir

# APPENDIX A.1

# Study Team Field Trip Report

# (June 12, 2002)

| Field Trip Log | | | |
|---|---|---|---|
| **Trip Log Number:** | 9 | **Project No.:** | 1003032.01180502 |
| **Dates:** | 6/12/02 | **Times:** | ~1355-1425 |
| **Site Name:** | Fine Gold | **Location:** | Friant |
| **Prepared By:** | DKR/JMH/WAM | **Reviewed By:** | |
| **Date:** | 6/12/02 | **Date:** | |

| **Attendees/Visitors Name** | **Organization/Phone/Email** |
|---|---|
| DKR | MWH, 925.685.6275 x125, david.k.rogers@mwhglobal.com |
| JMH | MWH, 925.685.6275 x143, james.m.herbert@mwhglobal.com |
| WAM | MWH, 425.602.4025 x1060, william.a.moler@mwhglobal.com |
| William Swanson | MWHA |
| Stephen Osgood/ Yung-Hsin Sun | MWHA |
| Jason Phillips | USCOE |
| Bill Luce/Greg Mongano/ Joel Sturm | USBR |
| Clarence Duster/Gary Turlington/Steve Harrington | USBR |
| Waiman Yip | DWR |
| | USFG |

| **Weather Conditions:** |
|---|
| Clear with slight haze, warm (80s), light breeze |

| **Access Route (attach map):** | |
|---|---|
| Highway 99, State highway 145 (E) through Madera, to Friant Road (S), to Lake Millerton Boat | |

Ramp. Fine Gold area accessed via Friant Rd (N) to Hildreth Rd (E), to Rd 216 (SE)

| **Attachments:** | Yes | No |
|---|---|---|
| Photo Log | ✓ | |
| Photos | ✓ | |
| Video Log (available) | ✓ | |
| Dictation Log (available) | ✓ | |
| Topographic Map | ✓ | |

**Purpose:**

Review proposed location of new dam site.

**Field Observations:**

**Existing Structures/Cultural Features:**

None noted at dam site; however, residential development is located above right abutment area.

**Right of Way/Access Restrictions:**

Roads lead into the Fine Gold area on the right bank. The only other access is via Millerton Lake.

**Overhead/Buried Utilities:**

None noted at the dam site.

**Description of Proposed Structures (attached a field sketch or sketch on a topo map):**

Unaware of specific recommendations made for this location.

**Description of Appurtenant Features (spillways, tunnels, pumping plants, flood routing/coffer dams/dewatering during construction, outlet works, switch yards, transformer yards, transmission lines, conveyance pipelines/canals, access roads, security, operation/maintenance):**

URS recommended a 400-foot high RCC dam with a storage of ~350 TAF (URS, 2000).

Madera Irrigation District (MID) has proposed two different storage configurations for Fine Gold. In 1988 & 1991 MID proposed, through Parsons, Brinkerhoff, Quaid, and Douglas (June 1988) and Wave Engineers (February 1991), a 350 TAF reservoir for offstream storage filled by pumps from a Lake Millerton. The pumps would be 400 mW reversible pumps/turbines.

In 2001, MID proposed, through URS (May 2001) 50 TAF to 80 TAF reservoir fed by natural runoff and a gravity diversion from Willow Creek. No hydropower facilities were proposed.

**Briefly Describe Geologic/Geotechnical Site Conditions:**

The Fine Gold dam site is located within the lower reaches of the Sierra Nevada foothills above the Great Valley. The Fine Gold dam site would be located across the generally south-flowing Fine Gold tributary to the San Joaquin River (CDMG, 1967).

The State geologic map shows the right abutment as being underlain by pre-Cretaceous metamorphic and the left abutment by Mesozoic granitic rock (CDMG, 1967). However, observations made indicate that both abutments are underlain by metamorphic rocks with granitic intrusions and quartz dikes.

As with most sites in the region, studies indicate that there are no faults in the area capable of producing ground motions greater than those generated by four known regional sources that include the San Andreas fault system, the Sierra Frontal fault system, the White Wolf fault, and the Garlock fault (USCOE, 1990).

**Location/Description of Nearest Borrow Areas (attach map or show on topo map):**

Borrow sites in close proximity were not noted, but may be present upstream in the Fine Gold drainage area.

**Location/Description of Equipment/Material Staging and Lay Down Areas (attach map or show on topo map):**

Potential staging and laydown areas in proximity were not noted, but may be in areas presently submerged or upstream in the Fine Gold drainage area.

**Identification of Environmental Sensitive Areas (wetlands, springs, rivers, streams, endangered/threatened species habitats, etc.):**

An oak woodland habitat covers the riverbank slopes.

**Description of Mining or Other Anthropologic Activities:**

None were noted.

**Action Items/Data Needs (list who has responsibility and schedule for completion):**

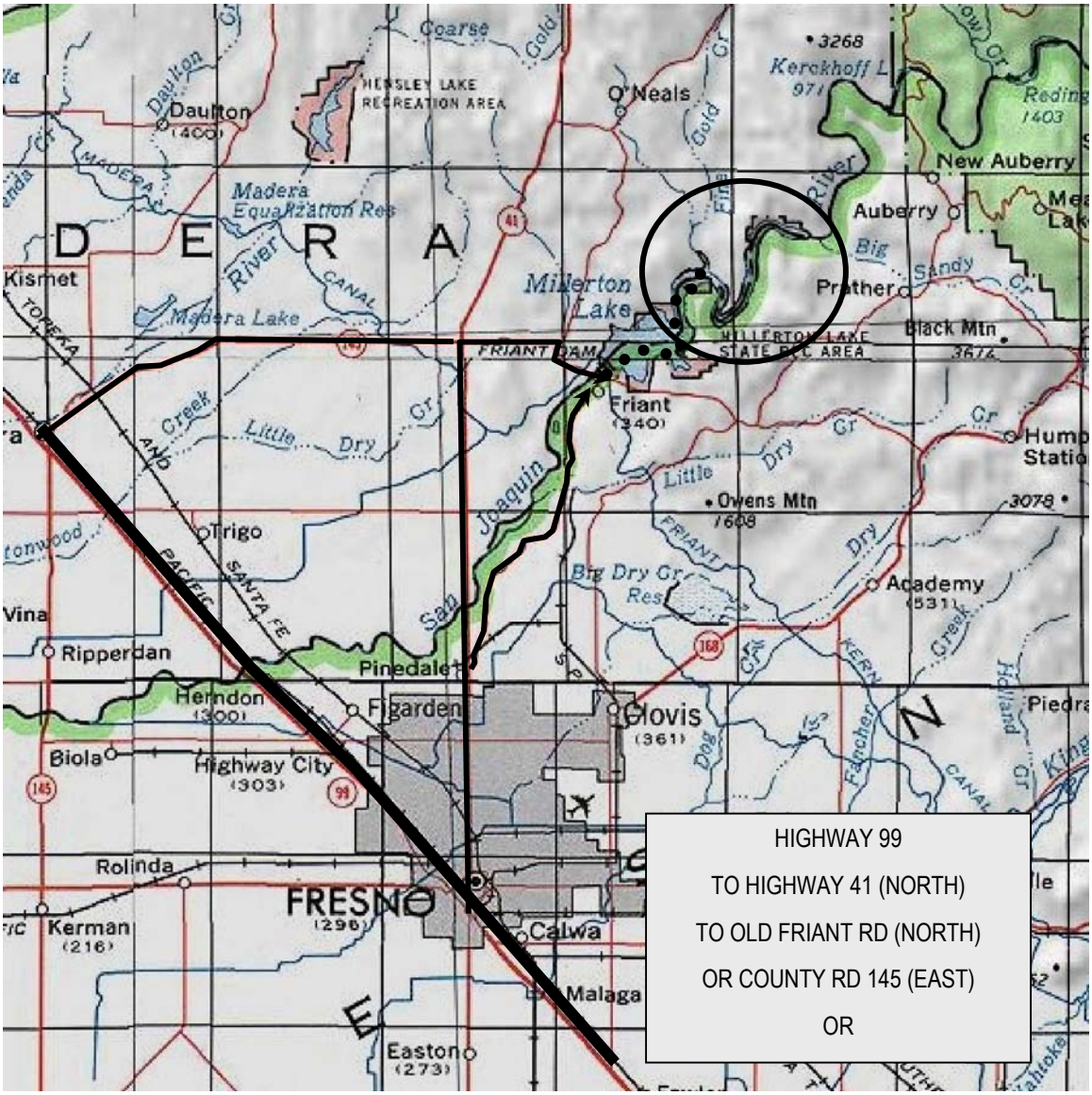
USBR to prepare draft Technical Memorandum and regional seismicity / faulting by August 23, 2002.

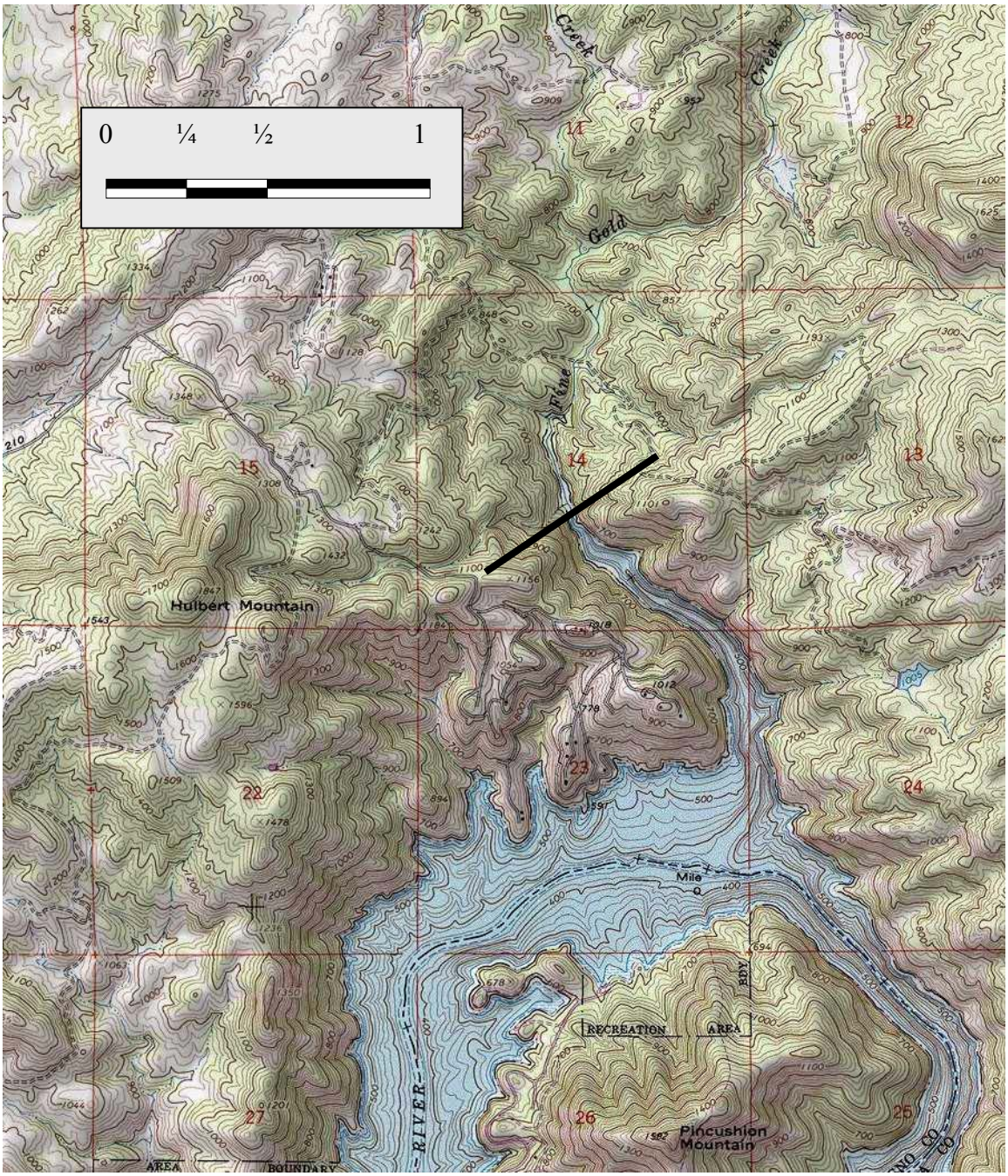
**ROUTING:**

MWH-5

USBR-3

DWR-2


HIGHWAY 99
TO HIGHWAY 41 (NORTH)
TO OLD FRIANT RD (NORTH)
OR COUNTY RD 145 (EAST)
OR
Daulton
O'Neals
New Auberry
Auberry
Prather
Kismet
Madera Lake
Millerton Lake
Friant
Trigo
Ripperdan
Pinedale
Herndon
Figarden
Clovis
Biola
Highway City
Rolinda
FRESNO
Kerman
Calwa
Malaga
Easton
Academy
Owens Mtn
Black Mtn
Big Dry Cr Res
Vina


0 ¼ ½ 1
Fine Gold Creek
Hulbert Mountain
RECREATION AREA
RIVER
Pincushion Mountain
AREA BOUNDARY

Fine Gold - Upstream view of Fine Gold Creek.


Upstream view of proposed right dam


Cross stream view of proposed left abutment.